

and represent as many as nine families, whilst five of the species (*i. e.* nearly half of the entire number) are Heteromorous. Although it may appear absurd, at first sight, to speculate from such scanty data, it nevertheless is not difficult to decide, even from this material (which, after all, is considerable enough from islands thus minute), to which of the Atlantic groups these intermediate "stepping-stones" are the more akin; for if we remove the *Cereyon centrimaculatum* and *Blaps gages*, which are common to both, from the above list, we shall perceive that, of the remaining nine, eight are most intimately connected with Canarian forms,—whilst two of these (the *Hegeter latebricola* and *Ditylus fulvus*) will, in all probability, be found to be absolutely identical with them. The *Pterostichus haligena*, moreover, is very nearly related to the *P. canariensis*, Brullé (belonging to a section, *Orthomus*, which apparently does not exist in Madeira); the *Harpalus pelagicus* is, emphatically, on the Canarian type; the *Acalles Neptunus* finds its natural ally in the *A. argillosus* of Teneriffe; the *Deucalion oceanicus* is more akin to the *D. gibbus* of the Canaries than to the Madeiran *D. Desertarum*; and the *Opatrum dilatatum* is but slightly removed from a representative of the same genus which is found in Fuerteventura and Lanzarote,—the *Helops Leacocianus* alone having perhaps more affinity with a species from the Madeiras (namely, the Porto-Santan *H. infernus*) than with any of those from the Canaries; though even of this I have by no means, as yet, completely satisfied myself. So that I think we may fairly conclude from these facts, that the Salvages, if indeed they are to be considered as belonging physically to either of the neighbouring groups, are essentially Canarian.

# VIII.—Descriptions of six new species of Chrysomela from the East.

By J. S. BALY.

## 1. *Chrysomela Templetoni*.

*C. breviter ovata*, valde convexa, obscure nigro-ænea, nitida; elytris subglobosis, obscure rufis, utrisque striis decem punctorum impressorum biseriatim dispositis instructis.—Long.  $3\frac{1}{2}$ –4 lin.

Very convex, obscure nigro-æneous, nitidous; elytra obscure rufous. Head nearly impunctate; antennæ black, slender, more than half the length of the body, subincrassate towards their apex. Thorax twice broader than long; sides slightly dilated from their base to before the middle, thence rotundate-angustate to the apex: above smooth and shining, sparingly impressed here and there with fine but distinct punctures; sides thickened, bounded within by a longitudinal depression. Scutellum semiovate. Elytra subglobose, smooth and shining,

each impressed with ten rows of distinct punctures, the first abbreviated, the second running parallel to the suture, the others arranged in pairs, the puncturing of the outer pair more distant than in the rest, all the rows less distinct and nearly obsolete near the apex; outer margin impressed with a single row of fine punctures; interspaces smooth, indistinctly punctured. Body beneath finely punctured; legs slender, subelongate.

*Hab.* Ceylon.

The form of the elytra and the slender legs give this insect a different appearance from the rest of the genus.

## 2. *Chrysomela Fortunei*.

*C. oblonga*, valde convexa, nitidissima, iridescent; subtus viridi æneoque variegata, capite pedibusque purpureis; supra viridi-ænea; capite thoraceque rufo-violaceo-maculatis, hoc transverso, a basi ad ante medium ampliato, lateribus incrassatis, intra marginem profunde punctatis, irregulariter bi-impressis, disco lævi, hic illic sparse punctato; elytris dorso obsolete gibbosis, infra humeros transversim impressis, tenuiter punctato-striatis, punctis in striis confuse biseriatim dispositis, ad latera et apicem versus subdissipatis, interspatiis lævibus; utrisque plaga magna male definita baseos, vittisque postice rufo-violaceis, vitta pone medium cærulea.—Long.  $5\frac{1}{2}$  lin.

Oblong, very convex, almost gibbous just behind the middle, nitidous, iridescent; body beneath bright metallic-green, more or less intermingled with aureous; head and legs deep metallic-blue; above brilliant metallic-green, variegated with rufo-violaceous. Head sparingly impressed with minute punctures; epistome semihumate, bordered above by a regularly curved line; antennæ slender, deep metallic-blue. Thorax before its middle twice broader than long; sides gradually dilated from their base to before the middle, thence suddenly rounded and narrowed to the apex; upper surface sparingly impressed here and there with deep distinct punctures, sides thickened, bounded internally by a number of large, deep, confluent variolose punctures, placed longitudinally in the middle of which are two large, deeply impressed, ill-defined irregular foveæ; the basal margin and an irregularly curved marking on either side the disk, united with its fellow at the base, rufo-violaceous. Scutellum smooth, semirotnundate-ovate. Elytra broader than the thorax, indistinctly dilated behind their middle, very convex, more particularly on the hinder half, their middle portion almost gibbous; surface very smooth and shining, each elytron below the shoulder with a well-defined transverse impression, which extends from immediately within the outer border nearly to the suture; finely punctate-striate, the punctures on the striæ irregularly arranged in a double row, the striæ themselves, about nine in number, becoming confused and irregular on the side and towards the apex of the elytron; interspaces on the disk smooth and nearly impunctate, those on the sides

and apex impressed with very fine remote punctures; whole surface distantly reticulate-aciculate; a large irregular ill-defined patch at the base, nearly covering the space above the transverse groove, and four or five broad vittæ, confluent at their base and apex, extending from the hinder margin of the groove to the apex of the elytron, rufo-violaceous; in the centre of the hinder disk is also a short deep-metallic-blue stripe.

*Hab.* Northern China. Collected by Mr. Fortune.

This beautiful species is very closely allied to *C. quadri-impressa*, and when first received, I considered it as merely a local variety of that insect; subsequently, however, it has been sent in some abundance, and after a careful examination of many individuals, I have come to the conclusion that it has a just claim to be considered a good and distinct species. It differs from *C. quadri-impressa* in the following characters:—it is larger, less regularly oblong, being slightly broader behind; its convexity is greater, particularly on the hinder portion of the elytra, which are also obsoletely gibbous in their middle; the whole body is much smoother, far less closely and coarsely punctured; the punctate striæ on the elytra are distinct over nearly the whole surface, whilst in the other species they are so mixed up with the coarse irregular punctation of the whole elytron, that they are only visible at the base; the thorax is more dilated on the sides, its disk is smoother and covered with much finer punctures, interspersed here and there with a few deeper impressions, which are much larger and more distinct than those in *C. quadri-impressa*; lastly, the grooved line bounding the upper edge of the epistome, instead of being triangular, forms a regular curve.

### 3°. *Chrysomela Stålîi*.

*C. ovata*, convexa, nitido-cuprea; thorace disco lævi, impunctato, lateribus a basi ad paullo ante medium leniter ampliatis, hinc ad apicem rotundato-angustatis, incrassatis, intra marginem profunde punctatis; elytris profunde punctato-striatis, punctis magnis, striis per paria subapproximatis, hic illic sulcatis.—Long. 4 lin.

Ovate, convex, shining cupreous. Head finely but sparingly punctured. Thorax nearly twice broader than long; sides moderately dilated from the base to just before their middle, thence rotundate-angustate to the apex: upper surface smooth and shining, convex and impunctate on the disk; sides incrassate, bounded within, for their whole length, by a broad but shallow longitudinal groove, the surface of which is covered with large, deep, round punctures; these, although somewhat crowded, are rarely confluent. Scutellum smooth, impressed in the middle with a single fovea. Elytra broadly ovate, very convex, deeply punctured, the punctures varying greatly in size and depth, and arranged, somewhat irregularly and at unequal distances, in ten longitu-

dinal rows on each elytron,—the first row abbreviated, the others approximating in pairs; on the outer border is also a single row of finer punctures; interspaces shining, slightly swollen, impressed with a few fine scattered punctures; the striæ here and there deeply sulcate. Body beneath subremotely punctured.

*Hab.* Northern China.

#### 4. *Chrysomela separata*.

*C. oblonga*, convexa, nitido-cuprea; thorace transverso, lateribus rotundatis, subincrassatis, profunde rugoso-punctatis, disco sparse hic illic fortiter punctato; elytris profunde punctatis, punctis in striis interruptis dispositis.—Long. 4 lin.

Oblong, convex, shining cupreous. Head vaguely punctured; antennæ scarcely half the length of the body, robust, nigro-æneous. Thorax twice broader than long; sides slightly ampliate-rotundate, narrowed in front: disk sparingly covered with large, deep, irregularly crowded punctures; sides incrassate, deeply and coarsely rugose-punctate, their inner edge bounded by a longitudinal depression. Scutellum smooth, impunctate. Elytra subovate, convex, deeply porose-punctate; punctures large, somewhat irregularly arranged in interrupted longitudinal rows (about ten in each elytron), which indistinctly approximate in pairs; interspaces smooth, slightly swollen, impunctate. Body beneath shining cupreous, finely but remotely punctured; legs nigro-æneous.

*Hab.* Northern India.

At once distinguished from the preceding species (to which it is otherwise closely allied) by its narrower and less convex form, and by the rugose lateral border of its thorax.

#### 5. *Chrysomela Bowringii*.

*C. oblonga*, convexa, nigro-ænea, nitida; thorace disco fortiter- et irregulariter-, lateribus rugoso-punctato; scutello elytris-que rufo-testaceis, æneo vix micantibus, his subcrebre subseriatim punctatis; abdomine ad apicem plus minusve rufo-testaceo.—Long. 4 lin.

Oblong, convex, nigro-æneous, nitidous; scutellum and elytra rufo-testaceous, with a faint metallic reflexion. Head punctured; antennæ half the length of the body, slightly incrassate towards their apex. Thorax nearly twice broader than long; sides slightly rounded, narrowed towards their apex, sometimes notched at the base, anterior angles subacute: disk irregularly punctured; sides moderately incrassate, coarsely rugose, bounded within by a longitudinal depression. Elytra four times the length of the thorax, oblong-ovate, sides slightly oval, apex regularly rounded; above moderately convex, surface covered with numerous irregular rows of deeply impressed but not very large punc-

tures; interspaces smooth, impunctate. Body beneath dark metallic-green, the posterior border of the three or four apical segments, and in some specimens the entire apex of the abdomen, rufo-testaceous.

*Hab.* Hong Kong. Collected by J. Bowring, Esq.

This pretty insect ought to stand near *C. grossa* and its congeners.

#### 6. *Chrysomela cingulata*.

*C. elongato-ovata*, convexa, nigro-ænea, nitida, supra obscure cuprea; thorace lateribus incrassatis, intra marginem sulcatis et profunde punctatis, disco tenuiter suberebre punctato; elytris fulvo-rufo marginatis, punctato-striatis, striis bifariam dispositis; antennarum articulo ultimo penultimo fere duplo longiore, oblongo-ovato, apice angustato.—Long. 3–4 lin.

Elongate-ovate, convex, nigro-æneous or obscure cupreous, nitidous; body above obscure cupreous. Head finely but distinctly punctured, puncturing scattered on the forehead, rather more crowded on the lower portion of the face; antennæ nigro-ceruleous, slender, rather shorter than half the body, their apical joint oblong-ovate, its apex subacuminate; three basal joints more or less fulvous beneath. Thorax twice broader than long; sides nearly straight and parallel behind the middle, rotundate-angustate in front, more quickly narrowed at the apex; upper surface with its lateral borders thickened, and bounded internally with a broad shallow longitudinal depression, more distinct at the base, its surface covered with large, deeply impressed, irregularly confluent, variolose punctures: disk, together with the thickened margin, subremotely covered with distinct but fine punctures. Scutellum smooth, shining, semi-ovate. Elytra slightly broader than the thorax, five times its length; sides subparallel, their outer margin bordered with fulvo-rufous: each elytron with eleven rows of distinct, deeply impressed punctures; the first abbreviated; the second running parallel to the suture; the eleventh finer, and placed on the extreme edge of the rufous border; the eight others forming four double rows of punctures, which are placed at nearly equal distances on the disk; interspaces vaguely and distantly reticulate-strigose, minutely and subremotely punctured. Beneath shining, distantly punctured; legs covered with subremote deep punctures.

*Hab.* Northern India.

Nearly allied to *Chrysomela marginata*, but easily separated from that species by its larger size, finer punctation, and, above all, by the different form and greater length of the terminal joint of its antennæ, which themselves are also more slender than in *C. marginata*. In the present insect the last joint is more slender and nearly twice the length of the penultimate, whilst in the other species it is broader, shorter in relation to the penultimate, more regularly ovate, with its upper edge towards the apex oblique.